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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, VAN H	

ART UNIT	PAPER NUMBER
2194	

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03/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,680	MATURANA ET AL.	
	Examiner	Art Unit	
	VAN H. NGUYEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the amendment filed 12/02/2008.

Claims 1-30 are presented for examination.

Applicant's terminal disclaimer has been approved. The prior nonstatutory double patenting rejections are withdrawn.

Applicant has amended claims 4, 6, 18, and 19 to overcome the claim objections. The prior objections are withdrawn.

Drawings

2. The drawings were received on 12/02/2008. These drawings are acceptable.

Specification

3. The cross reference related to the application cited in the specification must be updated (i.e., update the relevant status, with PTO serial numbers or patent numbers where appropriate, on pages 16 and 18). Correction is required.

Claim Objections

4. Claim 24 is objected to because of the following informalities: "In a industrial controller" (line 1) should read "In an industrial controller". Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding independent Claim 1, the claim recites an "industrial controller" comprising "components" and "program portions". As currently recited the "controller" comprises only computer software elements. Thus, the claim is a program per se and does not fall within any of the four enumerated categories of patentable subject matter in section 101.

Dependent Claims 2-10 and 12-15 are rejected for fully incorporating the deficiencies of their base claims.

Regarding independent Claim 16, the claim recites a "distributed control system" comprising "controllers". As currently recited the "system" comprises only computer software elements. Thus, the claim is a program per se and does not fall within any of the four enumerated categories of patentable subject matter in section 101.

Dependent Claims 17-23 are rejected for fully incorporating the deficiencies of their base claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10, 12-15, and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Somers** (US 6243396) in view of **Struger** (US 5896289).

As to claim 24:

Somers teaches in an industrial controller of a distributed control system, wherein the distributed control system operates to control a plurality of devices to perform a process, a method of communicating information between a first program portion and a second program portion, the method comprising: the first program portion is configured to govern agent-type behavior of the industrial controller and the second program portion is configured to at least one of control and monitor a first device of the plurality of devices; sending first data from one of the first and second program portions to modify a value of the data table; and providing the modified value of the data table to the other of the first and second program portions, wherein the other of the first and second program portions experiences a change in its operation in response to the modified value (see the Abstract and Figs.3-5 and the associated text).

Somers, however, does not specifically teach *"providing a data table including information relating to the control or status of the device that is accessible by each of the first and second program portions for both reading and writing"*.

Struger teaches *providing a data table including information relating to the control or status of the device that is accessible by each of the first and second program portions for both reading and writing* (see Col.12, lines 47-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Somers with Struger because it would have allowed control of complex communication networks in a relatively simple manner in which upgrades are easily performed.

As to claim 25:

Somers teaches generating a thread between the first and second program portions when the modifying of the value has occurred (see col.10, line 56-col.12, line 5).

As to claim 26:

Somers teaches communicating second data between the device and the first program portion by way of the data table (see col.10, line 56-col.12, line 5).

As to claim 27:

Somers teaches the program portion that receives the modified value is the first program portion that governs agent-type behavior, and wherein the modified value is representative of at least one of a piece of data and an event (see Figs.3-4 and the associated text).

As to claim 28:

Somers teaches in response to receiving the modified value, the first program portion matches the modified value with an application-specific script (see Figs.3-4 and the

associated text).

As to claim 29:

Somers teaches in response to receiving the modified value, the first program portion performs at least one action including at least one of the following: sends at least one of an additional piece of data and an additional event to the data table to cause a change in operation of at least one of the first program portion and an external device; and modifies an operation in relation to another agent other than a first agent including the first and second program portions (see Figs.3-4 and the associated text).

As to claim 30:

Somers teaches the action is performed by one of a planner and an execution controller based upon an application-specific agent script (see Figs.3-4 and the associated text).

As to claim 1:

The rejection of claim 24 above is incorporated herein in full. Additionally Struger teaches *the industrial controller including I/0 modules communicating signals with sensors and actuators attached to controlled machinery* (see Col.4, line 63-Col.5, line 23; and Col.11, lines 52-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Somers with Struger because it would have allowed control of

complex communication networks in a relatively simple manner in which upgrades are easily performed.

As to claim 2:

Somers teaches actuator signals generated by the second program portion for controlling one of the devices are communicated to the device by way of the data table, and wherein sensor signals generated by the device are communicated to the second program portion by way of the data table (see col.10, line 56-col.12, line 5).

As to claim 3:

Struger teaches the second program portion is written in ladder logic (see col.7, lines 6-29).

As to claim 4:

Somers teaches at least a portion of the first program portion is written in a first language selected from the group consisting of C++, JAVA and another high-level programming language, and is capable of generating script-type messages in a second language selected from the group consisting of XML Job Definition Language (JDL), Knowledge Query and Manipulation Language (KQML), and EXtensible Markup Language (XML) (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 5:

Somers teaches the agent-type behavior includes at least one of submitting requests for bids, and submitting bids, to other agents (see col.10, lines 51-53).

As to claim 6:

Somers teaches messages communicated between the first agent and other agents include a Foundation for Intelligent Physical Agents Agent Communication Language wrapper (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 7:

Somers teaches the data table provides an array of memory locations that can be monitored and modified by each of the first and second program portions, and wherein monitoring of the data table occurs by at least one of direct polling and event-driven mechanisms (see col.10, line 56-col.12, line 5).

As to claim 8:

Somers teaches the first program portion is capable of modifying values stored in the data table, wherein the second program portion is capable of monitoring the values and capable of responding to changes occurring in the values, and wherein in at least some circumstances data table changes are affected by a priority of events (see Figs.3-4 and the associated text).

As to claim 9:

Somers teaches the second program portion is capable of modifying values stored in the data table, and the first program portion is capable of monitoring the values and capable of responding to changes occurring in the values (see Figs.3-4 and the associated text).

As to claim 10:

Somers teaches the second program portion provides a thread to the first program portion whenever the second program portion modifies the values, in order to notify the first program portion that the modifications have occurred (see Figs.3-4 and the associated text).

As to claim 12:

Somers teaches a third program portion performed by the at least one processing component, wherein the third program portion at least one of controls and monitors a different one of the devices than the at least one device (see Figs.3-4 and the associated text).

As to claim 13:

Somers teaches a fourth program portion performed by the at least one processing component, wherein the fourth program portion controls additional agent-type behavior of the controller associated with a second agent, and wherein the fourth program portion

is in communication with the third program portion by way of at least one of the first data table and a second data table (see Figs.3-4 and the associated text).

As to claim 14:

Somers teaches a third program portion performed by the at least one processing component, wherein the third program portion controls additional agent-type behavior of the controller associated with a second agent, and wherein the third program portion is in communication with at least one of the second program portion and a fourth program portion by way of at least one of the first data table and a second data table (see Figs.3-4 and the associated text).

As to claim 15:

Somers teaches the first program portion includes at least one of a planner portion, an execution controller portion, a diagnostics portion, an equipment model portion, an application-specific agent scripts portion and a generic interface program, wherein the programs are capable of interacting with one another and deploying industrial based firmware software and communication networks to fulfill control actions (see Figs.3-4 and the associated text).

Allowable Subject Matter

7. Claims 16-23 appear to be allowable over the prior art of record, subject to the 35 USC § 101 rejection detailed above, and subject to a final search.

Response to Arguments

8. Applicant's arguments filed on 12/02/2008 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

9. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG-AI AN can be reached at (571) 272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194